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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,106	11/14/2003	Thomas Alan Cain	1497/6	2714

25297 7590 07/30/2007

JENKINS, WILSON, TAYLOR & HUNT, P. A.
SUITE 1200, UNIVERSITY TOWER
3100 TOWER BOULEVARD
DURHAM, NC 27707

EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
07/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/714,106	CAIN ET AL.	
	Examiner	Art Unit	
	Ian N. Moore	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,8,9,18,19,22-25 and 27-29* is/are rejected.

7)☒ Claim(s) *6,7,10-17,20,21,26,30 and 31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6-28-06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Transporting of Media Gateway Control Commands using High-Level Datalink Control (HDLC) Protocol.**

2. The disclosure is objected to because of the following informalities: reference number "**622**" labeled to TDM in FIG. 6 is not disclosed.

Appropriate correction is required.

Claim Objections

3. Claims 1-6,8-17,19,21, and 25-31 are objected to because of the following informalities:

Claim 1 recites " **a** media gateway control command " in line 4. For consistency and clarification with "**a** media gateway control command" recited in line 1, it is suggested to change "a media gateway control command" in line 7, to "**the** media gateway control command".

Claim 2 recites, "**MEGAGO**" in line 2. For consistency, it is suggested to revise as "**MEGACO**". Also, it is suggested to fully describe the acronym "MEGACO" when reciting for the first time in the claim.

Claim 2 recites " **a** media gateway control command " in line 2. For consistency and clarification with "**a** media gateway control command" recited in claim 1, line 1, it is suggested to change "a media gateway control command" in line 2, to "**the** media gateway control command".

Claim 3 recites " **a** media gateway control command " in line 2. For consistency and clarification with "**a** media gateway control command" recited in claim 1, line 1, it is suggested to change "a media gateway control command" in line 2, to "**the** media gateway control command".

Claim 4 recites " **a** command packet" in line 2. For consistency and clarification with "**a** command packet" recited in claim 1, line 5, it is suggested to change "a command packet" in line 2, to "**the** command packet".

Claim 6 recites " **a** command packet" in line 3. For consistency and clarification with "**a** command packet" recited in claim 1, line 5, it is suggested to change "a command packet" in line 3, to "**the** command packet".

Claim 8 recites " **a** media gateway" in line 1. For consistency and clarification with "**a** media gateway" recited in claim 1, line 8, it is suggested to change "a media gateway" in line 1, to "**the** media gateway".

Claim 8 recites " **a** TDM channel" in lines 2 and 4. For consistency and clarification with "**a** TDM channel" recited in claim 1, lines 8-9, it is suggested to change "a TDM channel" in lines 2 and 4, to "**the** TDM channel", respectively.

Claims 14,15 and 16 are also objected for the same reason as set forth above in claim 8.

Claim 8 recites " **a** media gateway controller" in line 3. For consistency and clarification with "**a** media gateway controller" recited in claim 1, line 1-2, it is suggested to change "**a** media gateway controller" in line 3, to "**the** media gateway controller".

Claim 8 recites " **a** media gateway located remotely from the media gateway controller" in line 3. For consistency and clarification with "**a** remote media gateway controller" recited in

claim 1, line 2, it is suggested to change "**a** media gateway located remotely from the media gateway controller" in line 3, to "**the remote** media gateway located remotely from the media gateway controller".

Claim 9 recites " **a** media gateway" in line 1. For consistency and clarification with "**a** media gateway" recited in claim 1, line 8, it is suggested to change "a media gateway" in line 1, to "**the** media gateway".

Claim 9 recites " **a** media gateway controller" in line 3. For consistency and clarification with "**a** media gateway controller" recited in claim 1, line 1-2, it is suggested to change "**a** media gateway controller" in line 3, to "**the** media gateway controller".

Claim 9 recites " **a** media gateway local to the media gateway controller" in line 3. For consistency and clarification with "**a** media gateway controller" recited in claim 1, line 8, it is suggested to change "**a** media gateway local to the media gateway controller" in line 3, to "**the** media gateway local to the media gateway controller".

Claim 10 recite the clause the optional language "**capable of**" in line 13. In order to present the claim in a better form and to describe a positive or require steps/function to be performing (i.e. using the claim language that does not suggest or make optionally but required steps to be performed), applicant is suggested to revise the claim language such that the steps/functions, which follows "capable of", to be performed are required (not optional).

Claim 11 recite the clause the optional language "**adapted to**" in lines 4 and 5. In order to present the claim in a better form and to describe a positive or require steps/function to be performing (i.e. using the claim language that does not suggest or make optionally but required

steps to be performed), applicant is suggested to revise the claim language such that the steps/functions, which follows "adapted to", to be performed are required (not optional).

Claims 12,14-17,19-21, and 25-31 are also objected for the same reason as set forth above in claim 11.

Claim 30 recites "**it**" in line 4. For consistency and clarification with "**the local** media gateway" recited in line 3, it is suggested to change "**it**" in line 3, to "**the** media gateway local to the local media gateway".

Claim 31 recites, "**that it determines are being addressed to it**" in line 2-3. For consistency and clarity, it is suggested to change to "**that determined are being addressed to the local media gateway**".

Claim 31 recites, "**that it determines are being addressed** " in line 3-4. For consistency and clarity, it is suggested to change to "**that determined are being addressed**".

Claims 5 and 13 are also objected since they are depended upon objected claims 1 and 18 as set forth above.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1,2,4,5,8,9,18,19,23 and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf (US006671367B1) in view of Araujo (US006097720A).

Regarding Claim 1, Graf discloses a method for transmitting a media gateway control command (see FIG. 3, control command; see col. 8, line 6-15; see col. 9, line 27-40) from a media gateway controller (see FIG. 3, MGC_B (Media Gateway Controller)) to a remote media gateway (see FIG. 3, MG_4 (Media Gateway 4)) using a protocol (see FIG. 3, STM (Synchronous Transfer Mode) protocol see col. 9, line 25-29), the method comprising:

(a) generating a media gateway control command (see FIG. 3, sending/generating control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65);

(b) the media gateway control command (see FIG. 3, control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65);

(d) transmitting the frame to a media gateway (see FIG. 3, MG_3 transmits STM frame to MG_4) using a time division multiplexed (TDM) channel (see FIG. 3, using a TDM channel which embedded/carried within STM (Synchronous Transfer Mode) network (e.g. ISDN, T1, E1, SDH, SONET); see col. 9, line 25-29).

Graf does not explicitly disclose a high-level datalink control (HDLC) protocol, (b) inserting the control command into a command packet; (c) inserting the command packet into an HDLC frame. However, Araujo teaches

(b) inserting a control command (see FIG. 2, adding/encapsulating/inserting Information 101 (i.e. IP packet with command/signaling/header information)) into a command packet (see

FIG. 2, into a PPP packet which contains command/signaling/header information; see col. 7, line 31-50) and;

(c) inserting the packet into an HDLC frame (see FIG. 3, HDLC frame, where PPP packet is encapsulated/inserted into; see col. 7, line 50-54, 62 to col. 8, line 20); and

(d) transmitting the HDLC frame (see FIG. 11, transmitting PPP over HDLC frame via backbone tunnels 412) to a gateway (see FIG. 11, to edge Device 406) using a time division multiplexed (TDM) channel (see FIG. 11, using backbone TDM channels/tunnels 412 of Publish Switch Telephone Network (PSTN) 407: see col. 12, line 35-66).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a high-level datalink control (HDLC) protocol, (b) inserting the control command into a command packet; (c) inserting the command packet into an HDLC frame, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 2, Graf discloses wherein generating a media gateway control command includes generating a MEGAGO command (see col. 2, line 1-3; X-CP is a MEGACO (i.e. H.248 commands)).

Regarding Claim 4, the combined system of Graf and Araujo discloses inserting media gateway control command into a command packet as set forth above in claim 1.

Graf does not explicitly disclose a packet header portion and payload portion.

However, Araujo further discloses forming the command packet (see FIG. 2, forming/creating PPP packet) having a packet header portion (see FIG. 2, with a header 100) and a packet payload portion (see FIG. 2, and Information 101); see col. 7, line 31-50.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a packet header portion and payload portion in framing/encapsulating processes, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 5, the combined system of Graf and Araujo discloses wherein forming the command packet as set forth above in claim 4.

Graf does not explicitly disclose a command flag in the packet header portion that indicates a type of payload contained in the packet payload portion.

However, Araujo further discloses inserting a command flag in the packet header portion (see FIG. 2, Protocol field 100 in the header) that indicates a type of payload contained in the packet payload portion (see col. 7, line 31-41; protocol filed identifies the datagram encapsulated in the information/payload).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a command flag in the packet header portion that indicates a type of payload contained in the packet payload portion in framing/encapsulating process, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 8, the combined system of Graf and Araujo discloses wherein transmitting the HDLC frame to a media gateway using a TDM channel as set froth above in claim 1. Graf further discloses transmitting the frame from a media gateway controller (see FIG. 3, MGC_B) to a media gateway located remotely from the media gateway controller (see FIG. 3,

MG_4 is remote from MGC_B) using a TDM channel (see FIG. 3, using TDM channel embedded/carried within STM network) previously used to carry public switched telephone network (PSTN) data (see FIG. 3, TDM channel within STM network which previously used to carry PSTN/TDM data for previous TDM connection); see col. 9, line 25-29).

Graf does not explicitly disclose transmitting HDLC using a TDM channel previously use between PSTN switching offices.

Araujo discloses transmitting the HDLC frame to a remote gateway (see FIG. 11, sending/transmitting HDLC frames to Edge device 406, or RAS 406) using a TDM channel (see FIG. 11, using TDM channel/Tunnel 412) previously used to carry public switched telephone network (PSTN) data (see FIG. 407, PSTN 407 data, which formally/previously use to carry PSTN/TDM channel data for previous TDM connection) between PSTN switching offices (see FIG. 11, between PSTN switching CPEs 400-404 and 390).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide transmitting HDLC using a TDM channel previously use between PSTN switching offices, as taught by Araujo in the system of Graf, so that it would overcome the requirement of expensive deployment to provide the needed capacity; see Araujo col. 2, line 15-25.

Regarding Claim 9, the combined system of Graf and Araujo discloses transmitting HDLC frame to a media gateway as set froth above in claim 1. Graf further discloses transmitting the media gateway control command (see FIG. 3, control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65) from a media gateway controller (see FIG. 3, MGC_B) to a media gateway local to the media

gateway controller (see FIG. 3, MG_3) and from the local media gateway to the media gateway located remotely from the media gateway controller (see FIG. 3, MG_4); see col. 9, line 16 to col. 10, line 26).

Regarding Claim 18, Graf discloses a system (see FIG. 3, a telecommunication network) for managing a remote media gateway (see FIG. 3, MG_4 (Media Gateway 4)), the system comprising:

(a) a media gateway controller (see FIG. 3, MGC_B (Media Gateway Controller)) for generating media gateway control commands (see FIG. 3, control command, (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65);

(b) a local media gateway (see FIG. 3, MG_3 (Media Gateway 3)) operatively associated with the media gateway controller (see FIG. 3, MG_3 associated with MGC_B) for sending and receiving media streams to and from external networks (see FIG. 3, MG_3 couples to external network to transport (i.e. transmitting and receiving) user plane data; see col. 8, line 10-36; see col. 10, line 1-26);

(c) an interface (see FIG. 3, an interface that couples between MGC_B and STM interface of MG_3) operatively associated with at least one of the media gateway and the media gateway controller (see FIG. 3, the interface relates/associates with MG_3 and MGC_B) for transmitting media gateway control commands (see FIG. 3, transmitting control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65) intended for a remote media gateway controller (see FIG. 3, to MGC_C/MG_4) in frames (see FIG. 3, MG_3 transmits STM frame to MG_4/MGC_C; see col. 9, line 25-29); and

(d) at least one time division multiplexed (TDM) interface (see FIG. 3, TDM interface which is embedded/part of STM interface of MG_3) operatively associated with the interface for sending the media gateway control commands (see FIG. 3, STM interface associates/relates with the interface for sending control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3)) to the remote media gateway (see FIG. 3, to MG_4) via a TDM channel (see FIG. 3, using TDM channel which embedded/carried within STM (Synchronous Transfer Mode) network (e.g. ISDN, T1, E1, SDH, SONET); see col. 9, line 25-29).

Graf does not explicitly disclose (c) a high-level data link control (HDLC) interface for encapsulating data intended for a remote media gateway controller in HDLC frames; (d) associated with the HDLC interface.

However, Araujo teaches

(b) a local gateway (see FIG. 11, Edge Device 405; see FIG. 9, access Mux 102) for sending and receiving media streams (see col. 5, line 55-60; transmitting and receiving data traffic) to and from external networks (see FIG. 11, to and from a network of CPEs (400-404)); see col. 9, line 60 to col. 10, line 20; see col. 12, line 35-44);

(c) a high-level data link control (HDLC) interface (see FIG. 9, a combined interface of ports 103-105, bus 106, and CPU 107 that processes HDLC frames) operatively associated with at least one of the gateway (see FIG. 11, Edge device 405; see FIG. 9, access Mux 102; see col. 9, line 60 to col. 10, line 20) for encapsulating control commands (see FIG. 2-3, PPP packet with command/signaling/header information is encapsulated into HDLC) intended for a remote gateway (see FIG. 9,11, Edge device 406 or RAS 408) in HDLC frames (see FIG. 3, HDLC frame; see col. 7, line 50-54, 62 to col. 8, line 20); and

(d) at least one time division multiplexed (TDM) interface (see FIG. 9, Tunnel Port 108 of Access Mux 102 which has TDM capability; see FIG. 11, Tunnel 412 port of Edge Device 405) operatively associated with the HDLC interface for sending the control commands (see FIG. 3, Tunnel port associates/relates with the combined interface of ports for sending command/signaling/header information) to the remote gateway (see FIG. 9,11, Edge device 406 or RAS 408) via a TDM channel (see FIG. 11, backbone TDM channels/tunnels 412 of Publish Switch Telephone Network (PSTN) 407: see col. 12, line 35-66).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide (c) a high-level data link control (HDLC) interface for encapsulating data intended for a remote media gateway controller in HDLC frames; (d) associated with the HDLC interface, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 19, Graf discloses wherein the media gateway controller (see FIG. 3, MGC_B) is adapted to generate call control commands (see FIG. 3, control command, (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65) intended for the remote media gateway (see FIG. 3, MG_4) and to forward the call control commands to the remote media gateway via the interface (see FIG. 3, forwarding the call via an interface that couples between MGC_B and STM interface of MG_3 to MG_4); see col. 9, line 25-29.

Graf does not explicitly disclose a high-level data link control (HDLC) interface.

However, Araujo discloses generate control commands (see FIG. 2, adding/encapsulating/inserting Information 101 (i.e. IP packet with command/signaling/header information)) intended for the remote gateway (see FIG. 9,11, for Edge device 406 or RAS 408) and to forward the control commands to the remote gateway via the HDLC interface (see FIG. 3, forwarding HDLC frame via a combined interface of ports 103-105, bus 106, and CPU 107; see col. 7, line 50-54, 62 to col. 8, line 20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a high-level data link control (HDLC) interface, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 23, Graf discloses wherein the interface and the TDM interface are located on the media gateway as set forth above in claim 18.

Graf does not explicitly disclose a high-level data link control (HDLC) interface.

However, Araujo discloses the HDLC interface and the TDM interface are located on the gateway as set forth above in claim 18.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an HDLC framing, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 27, the combined system of Graf and Araujo discloses the interface is adapted to encapsulate the media gateway commands in command packets as set forth above in claim 18.

Graf does not explicitly disclose encapsulating HDLC the command packet in the HDLC frames.

However, Araujo further discloses encapsulating control commands (see FIG. 2-3, PPP packet with command/signaling/header information is encapsulated into HDLC) in HDLC frames (see FIG. 3, in the HDLC frame; see col. 7, line 50-54, 62 to col. 8, line 20).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide encapsulating HDLC the command packet in the HDLC frames, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 28, the combined system of Graf and Araujo discloses the interface is adapted to encapsulate the media gateway control commands in command packets as set forth above in claim 18 and 27.

Graf does not explicitly disclose the HDLC interface is adapted to construct a header, each header including at least one identifier for indicating a type of control command.

However, Araujo further discloses wherein the HDLC interface is adapted to construct a header (see FIG. 2, a header 100) for each of the command packets (see FIG. 2, PPP packet), each header including at least one identifier (see FIG. 2, Protocol field 100 in the header) for indicating a type of control command included in the command packets (see col. 7, line 31-41; protocol filed identifies the datagram encapsulated in the information/payload).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the HDLC interface s adapted to construct a header, each header including at least one identifier for indicating a type of control command in

framing/encapsulating process, as taught by Araujo in the system of Graf, so that it would provide a simple technique for encapsulating data from variety of protocols; see Araujo col. 5, line 23-27.

Regarding Claim 29, the combines system of Graf and Araujo discloses wherein the TDM interface is adapted to forward the media gateway control commands as set forth above in claim 18. Graf further discloses transmitting the frame from a media gateway controller (see FIG. 3, MGC_B) to a media gateway located remotely from the media gateway controller (see FIG. 3, MG_4 is remote from MGC_B) using a TDM channel (see FIG. 3, using STM channel) previously used to carry public switched telephone network (PSTN) data (see FIG. 3, STM/TDM channel which previously/formally carries PSTN/TDM data); see col. 9, line 25-29).

Graf does not explicitly disclose transmitting HDLC using a TDM channel previously use between PSTN switching offices.

Araujo discloses transmitting the HDLC frame to a remote gateway (see FIG. 11, Edge device 406, or RAS 406) using a TDM channel (see FIG. 11, using TDM channel/Tunnel 412) previously used to carry public switched telephone network (PSTN) data (see FIG. 407, PSTN 407 data, which formally/previously use to carry PSTN/TDM channel data) between PSTN switching offices (see FIG. 11, between PSTN switching CPEs 400-404 and 390).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide transmitting HDLC using a TDM channel previously use between PSTN switching offices, as taught by Araujo in the system of Graf, so that it would overcome the requirement of expensive deployment to provide the needed capacity; see Araujo col. 2, line 15-25.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Araujo as applied to claim 1 above, and further in view of Archibald (US007054325B1).

Regarding Claim 3, the combined system of Graf and Araujo discloses wherein generating a media gateway control command as set forth above in claim 1.

Neither Graf nor Araujo explicitly disclose a media gateway control protocol (MGCP) command.

However, generating a media gateway control protocol (MGCP) between Media Gateway (MG) and Media Gateway Controller (MGC) is well known in the art as disclosed by IETF RFC-2705. In particular, Archibald discloses generating a media gateway control command includes generating a media gateway control protocol (MGCP) command (see FIG. 1, MGCP signaling messages are transmitted between MGC 10 and MG 12; see col. 4, line 25-27).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide MGCP command/message, as taught by Archibald, in the combined system of Graf and Araujo, so that it would provide a signaling protocol means for communication between MG and MGC; see Archibald col. 1, line 28-40.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Araujo as applied to claim 18 above, and further in view of Scoggins'908 (US 20030227908A1).

Regarding Claim 22, Graf discloses wherein the interface and the TDM interface are located on the media gateway as set forth above in claim 18. Araujo discloses the HDLC interface and the TDM interface are located on the gateway as set forth above in claim 18.

Neither Graf nor Araujo explicitly located on the media gateway controller.

However, it is well known and established in the art that both media gateway and gateway controller can be integrated into one entity, by implementing interfaces of media gateway to media gateway controller. In particular, Scoggins'908 discloses that interfaces on the media gateway (MG) are also located on the media gateway controller (MGC) since both media gateway and media gateway controller are integrated into a integrated node 301 (i.e. by incorporating all interfaces of MG into MGC); see FIG. 3; see page 1, paragraph 13; see col. 3, paragraph 24,38).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide interfaces from media gateway to media gateway controller in an integrated node, as taught by Scoggins'908, in the combined system of Graf and Araujo, so that it would efficiently negotiate parameters and it will also save extra processing and space by having one integrated system; see Scoggins'908 page 2, paragraph 17-20.

8. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Araujo as applied to claim 18 above, and further in view of Takeguchi (US 20030043734A1).

Regarding Claim 24, the combined system of Graf and Araujo discloses wherein the at least one TDM interface for connecting the media gateway controller to the remote media gateway as set forth above in claim 18.

Neither Graf nor Araujo explicitly disclose a plurality of redundant TDM interfaces for redundantly connecting.

However, Takeguchi discloses a plurality of redundant TDM interfaces (see FIG. 1, working unit 21 W and protection unit 21P of SDH/TDM transmission equipment 2) for redundantly connecting between two nodes (see FIG. 1, connecting protection lines 5 between SDH nodes 2 and 3; see page 5, paragraph 72-76.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a plurality of redundant TDM interfaces for redundantly connecting, as taught by Takeguchi, in the combined system of Graf and Araujo, so that it would provide performing a transmission processing of the transmission frame through protection line in lieu of the working line when a fault occurs; see Takeguchi see page 5, paragraph 73.

Regarding Claim 25, the combined system of Graf and Araujo discloses wherein the TDM interface is connected to the local media gateway and wherein the local media gateway is adapted to switch HDLC frames to TDM interface as set forth above in claim 18.

Neither Graf nor Araujo explicitly discloses the local gateway/node is adapted to detect failure of any one of the TDM interfaces and to switch frames from the failed interface to any of the other TDM interfaces.

Takeguchi further discloses wherein the plurality of redundant TDM interfaces are connected to the local gateway/node (see FIG. 1, working unit 21 W and protection unit 21P are connected to SDH/TDM transmission equipment 2) and wherein the local gateway/node is adapted to detect failure of any one of the TDM interfaces and to switch frames from the failed interface to any of the other TDM interfaces (see FIG. 1, equipment 2 upon detecting a fault in working line and switching the transmission of frames to the protection line; see page 5, paragraph 72-76.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide wherein the local gateway/node is adapted to detect failure of any one of the TDM interfaces and to switch frames from the failed interface to any of the other TDM interfaces, as taught by Takeguchi, in the combined system of Graf and Araujo, so that it would continue a normal communication after the failure; see Takeguchi see page 2, paragraph 22-24.

Allowable Subject Matter

9. **Independent claim 10** is objected to as set forth above in paragraph 3, but would be allowable if rewritten to overcome the objection. The following is a statement of reasons for the indication of allowable subject matter:

Claim 10 is allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose or render obvious the following *italic* limitations:

In claim 10, ... *the controller being operatively associated with the command interface and being capable of differentiating between commands intended for the media gateway and commands intended for a remote media gateway*... in combination with other limitations recited as specified in Claim 10.

The first closest prior art Graf (US006671367B1) discloses a system (see FIG. 3, a telecommunication network) for managing a remote media gateway (see FIG. 3, MG_4 (Media Gateway 4)), the system comprising: a media gateway controller (see FIG. 3, MGC_B (Media Gateway Controller)) for generating media gateway control commands (see FIG. 3, control

command, (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65); a local media gateway (see FIG. 3, MG_3 (Media Gateway 3)) operatively associated with the media gateway controller (see FIG. 3, MG_3 associated with MGC_B) for sending and receiving media streams to and from external networks (see FIG. 3, MG_3 couples to external network to transport (i.e. transmitting and receiving) user plane data; see col. 8, line 10-36; see col. 10, line 1-26); an interface (see FIG. 3, an interface that couples between MGC_B and STM interface of MG_3) operatively associated with at least one of the media gateway and the media gateway controller (see FIG. 3, the interface relates/associates with MG_3 and MGC_B) for transmitting media gateway control commands (see FIG. 3, transmitting control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3); see col. 2, line 1-4; see col. 9, line 27-65) intended for a remote media gateway controller (see FIG. 3, to MGC_C/MG_4) in frames (see FIG. 3, MG_3 transmits STM frame to MG_4/MGC_C; see col. 9, line 25-29); and at least one time division multiplexed (TDM) interface (see FIG. 3, STM interface of MG_3) operatively associated with the interface for sending the media gateway control commands (see FIG. 3, STM interface associates/relates with the interface for sending control command (i.e. MEGACO or H.248 command) via X_CP interface (i.e. X_CP_3)) to the remote media gateway (see FIG. 3, to MG_4) via a TDM channel (see FIG. 3, via STM channel; see col. 9, line 25-29).

The second closest prior art Araujo (US006097720A) teaches a local gateway (see FIG. 11, Edge Device 405; see FIG. 9, access Mux 102) for sending and receiving media streams (see col. 5, line 55-60; transmitting and receiving data traffic) to and from external networks (see FIG. 11, to and from a network of CPEs (400-404)); see col. 9, line 60 to col. 10, line 20; see col.

12, line 35-44); a high-level data link control (HDLC) interface (see FIG. 9, a combined interface of ports 103-105, bus 106, and CPU 107) operatively associated with at least one of the gateway (see FIG. 11, Edge device 405; see FIG. 9, access Mux 102; see col. 9, line 60 to col. 10, line 20) for encapsulating control commands (see FIG. 2-3, PPP packet with command/signaling/header information is encapsulated into HDLC) intended for a remote gateway (see FIG. 9,11, Edge device 406 or RAS 408) in HDLC frames (see FIG. 3, HDLC frame; see col. 7, line 50-54, 62 to col. 8, line 20); and at least one time division multiplexed (TDM) interface (see FIG. 9, Tunnel Port 108 of Access Mux 102; see FIG. 11, Tunnel 412 port of Edge Device 405) operatively associated with the HDLC interface for sending the control commands (see FIG. 3, Tunnel port associates/relates with the combined interface of ports for sending command/signaling/header information) to the remote gateway (see FIG. 9,11, Edge device 406 or RAS 408) via a TDM channel (see FIG. 11, backbone TDM channels/tunnels 412 of Publish Switch Telephone Network (PSTN) 407: see col. 12, line 35-66).

In view of the above, Graft and Araujo individually or combined fails to disclose or render obvious the above ***italic*** limitations as claimed.

10. **Dependent claims 6,7, 11-17, 20,21, 26, 30 and 31** are objected to as set forth above in paragraph 3, and as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 6,7,20,21,26, 30 are allowable over the prior art of record since the cited reference taken individually or in combination fails to particularly disclose or render obvious the following *italic* limitations:

In claim 6, ... *inserting the media gateway control command into an IP packet and...inserting the IP packet in the packet payload portion and inserting a destination interface identifier for the IP packet in the packet header portion*... in combination with other limitations recited as specified in Claim 6.

In claim 7, ... *inserting the media gateway control command in the packet payload portion and inserting a command identifier in the packet header portion for identifying the media gateway control command.* In combination with other limitations recited as specified in Claim 7.

In claim 20, ... *generate network management messages intended for the remote media gateway and to forward the network management messages to the remote media gateway via the HDLC interface*... in combination with other limitations recited as specified in Claim 20.

In claim 21, ... *generate media gateway maintenance commands intended for the remote media gateway and to forward the media gateway maintenance commands to the remote media gateway via the HDLC interface*... in combination with other limitations recited as specified in Claim 21.

In claim 26, ... *wherein the media gateway controller is adapted to detect failure of any one of the TDM interfaces and to switch HDLC frames from the failed interface to any of the other TDM interfaces*... in combination with other limitations recited as specified in Claim 26.

In claim 30, ... *wherein the media gateway controller is adapted to send the media gateway control commands to the local media gateway and wherein the local media gateway is*

adapted to determine whether the media gateway control commands are addressed to it or to the remote media gateway.... in combination with other limitations recited as specified in Claim 30.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Gentry (US006799210B1)** disclose architecture for a media gateway to identify and register with multiple media gateway controller for various types of services.
- **Scoggins'254 (US006832254B1)** discloses an apparatus and method for associating end-to-end call ID with connection between TDM network and packet network via media gateway controlled by a media gateway controller.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ian N. Moore
Examiner
Art Unit 2616

7-18-07